Our Case No.: 1391/1561

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ROBERT J. YATKA et al.	
Serial No.: 10/712,114	Examiner: Arthur L. Corbin
Filing Date: November 13, 2003	Group Art Unit No.: 1761
For: METHOD OF CONTROLLING RELEASE OF N-SUBSTITUTED DERIVATIVES OF ASPARTAME IN CHEWING GUM AND GUM PRODUCED THEREBY	Confirmation No.: 7674

DECLARATION OF SONYA S. JOHNSON UNDER 37 C.F.R. § 1.132

I, Sonya S. Johnson, hereby declare:

1. I am employed by the Wm. Wrigley Jr. Company, the assignee of the above captioned application, as a senior principle scientist of the flavor group in the Research and Development Department. I have worked at Wrigley since 1989, all the time in R&D doing flavor chemistry, flavor development, and flavor analysis. I am one of the named inventors for the above captioned application.

2. I graduated from Southampton College, a division of Long Island University, in 1982 with a BS in Biology and a BS in Chemistry.

3. I recently organized and supervised tests relating to the use of neotame (an N-substituted derivative of aspartame) in a coating on a chewing gum pellet compared to use of neotame in the composition of the gum pellet. As part of those tests, I supervised the production of coated chewing gum pellets from two gum compositions and two coating syrups that were identical except for their inclusion of neotame. In one sample the neotame was included in the gum center. In the other sample the neotame was used

in the pellet coating. The gum compositions were made into 1 g pieces, and coated to give a 35% coating by weight (on a dry basis), for an overall coated pellet piece weight of 1.5 g.

4. A 700 gram quantity of pillow shaped 1-gram centers was added to a 10-inch lab size coating pan and coated with maltitol syrup using a ladle. Room temperature air was blown onto the gum surface to dry the coating after each syrup application. After each of the first 8 syrup applications, about 5 grams of dry charge was applied until the 45 grams of maltitol was used. Menthol was dissolved in the peppermint flavor and half of the flavor blend was added after about 1/3 of the coating syrup had been applied. After the next 1/3 of coating, the second half of the flavor blend was added. The gum was coated to about a 1.5 gram piece size, as noted above. No polishing agent was applied on these samples.

5. The gum center compositions and coating syrup formulas were as follows.

	Sample 054-201A Neotame in gum center	Sample 054-201B Neotame in coating
Gum Pellet Composition	%	%
Sorbitol	48.636	48.69
Base	31.00	31.00
Calcium Carbonate	13.90	13.9
Glycerin	2.50	2.50
Peppermint Flavor	2.86	2.86
Neotame	0.054	0.0
Water	1.05	1.05
Lab Syrup Coating Formulas		
Maltitol	775g	775g
Water	250g	250g
Gum Talha	80g	80g
Neotame	0g	0.91g*
Titanium Dioxide	9.0g	9.0g
Maltitol Dry Charge	45g	45g
Syrup solids, %	68-72	68-72
Temp.,°C	70-75°C	70-75°C

Flavor for Coating (for 700g centers):
3.9g Peppermint flavor 2.1g Menthol

*Including the dry charge quantity, but excluding the water, neotame in the syrup on a dry basis is 0.1% and thus is 0.1% of the coating.

Each sample coated pellet thus included the same amount (0.035%) of neotame in the overall product. For Sample No. 054-201A: 0.054% in center X 0.65 (% of the center as to the entire gum product) = 0.035%. For Sample No. 054-201B: 0.1% in coating X 0.35 (% of the coating as to the entire gum product) = 0.035%.

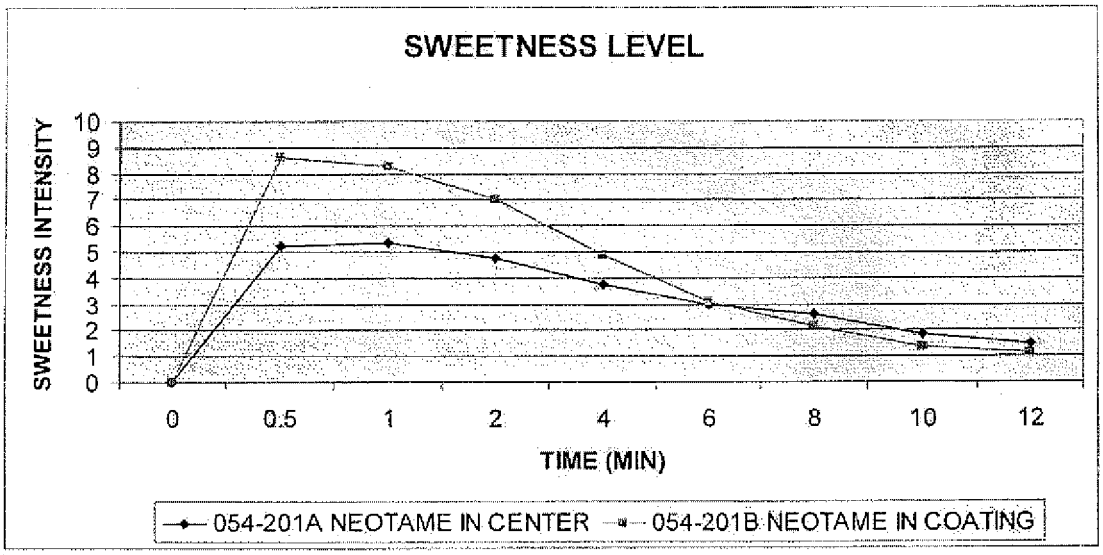
6. The samples were tested using an Employee Sensory Analysis (ESA), a common procedure used at Wrigley to demonstrate proof of hypothesis. In the neotame panel we had n=8 employees. The results reported below are from those 8 panelists. The samples were given to the panelists in a random order, so that there would be no order effect in the testing. The employees did not know what the sample was, as it was only identified by code. A sample ballot was filled out by each employee as the time was called out (a sample ballot is attached). Employees chewed a saltine cracker and drank water before evaluating the next sample.

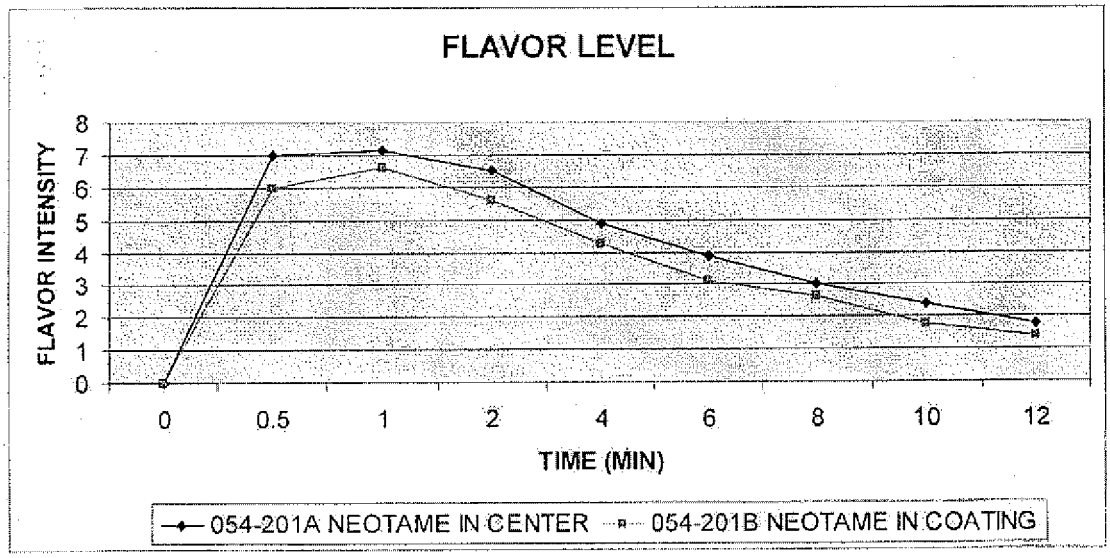
7. The raw data from the tests was as follows:

054-201A			SWEETNESS LEVEL							
	Panelist	Time (min)	0.5	1	2	4	6	8	10	12
	1		4	4	5	4	3	2	2	1
	2		7	7	7	7	6	6	4	3
	3		4	4	2	2	1	0	0	0
	4		6	6	6	5	4	3	3	3
	5		8	8	6	4	4	4	2	2
	6		4	3	2	1	0	0	0	0
	7		4	5	5	3	2	2	1	0
	8		5	6	5	4	4	4	3	3
	AVG		**5.3**	**5.4**	**4.8**	**3.8**	**3.0**	**2.6**	**1.9**	**1.5**
054-201B			SWEETNESS LEVEL							
	Panelist	Time (min)	0.5	1	2	4	6	8	10	12
	1		6	6	5	4	3	2	1	0
	2		10	9	9	8	5	3	1	1
	3		8	7	5	2	1	0	0	0
	4		9	9	7	5	4	3	3	3
	5		10	8	6	4	3	3	2	2
	6		9	9	8	4	2	1	0	0
	7		10	10	9	6	3	2	1	1
	8		7	8	7	6	4	3	3	2
		AVG	**8.6**	**8.3**	**7.0**	**4.9**	**3.1**	**2.1**	**1.4**	**1.1**

054-201A			FLAVOR LEVEL							
	Panelist	Time (min)	0.5	1	2	4	6	8	10	12
	1		5	5	6	5	4	3	2	2
	2		8	8	7	6	5	4	3	2
	3		6	6	5	5	4	4	3	3
	4		8	8	7	5	4	3	3	2
	5		9	8	6	4	4	3	2	2
	6		7	9	8	4	2	1	1	0
	7		6	6	7	5	4	3	2	1
	8		7	7	6	5	4	3	3	2
		AVG	**7.0**	**7.1**	**6.5**	**4.9**	**3.9**	**3.0**	**2.4**	**1.8**
054-201B			FLAVOR LEVEL							
	Panelist	Time (min)	0.5	1	2	4	6	8	10	12
	1		7	7	6	5	4	3	2	2
	2		7	7	6	5	4	3	1	1
	3		4	4	4	3	2	2	1	1
	4		8	8	7	5	4	3	3	3
	5		7	8	6	5	3	3	2	2
	6		8	10	7	4	3	2	2	0
	7		3	4	4	3	2	2	1	1
	8		4	5	5	4	3	3	2	1
		AVG	**6.0**	**6.6**	**5.6**	**4.3**	**3.1**	**2.6**	**1.8**	**1.4**

8. The mean test data is graphed below:





9. The sweetness levels in these results show that neotame used in a pellet gum coating gives a greater sweetness than the same level of neotame used in the gum center, for the first 6 minutes of chewing. After 6 minutes of chewing the sweetness levels were substantially similar. Thus the duration of sweetness was not impacted after 6 minutes of chewing. The flavor intensity was not significantly impacted.

10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signed: Sonya S. Johnson
Sonya S. Johnson

Date: 2-13-08

ESA SENSORY PANEL DATA SHEET NAME: _____ PANELIST NUMBER: _____ DATE: _____

PRODUCT CODE: 054-201A _____ INCENTIVE _____ LUNCH TICKET

FLAVOR LEVEL

	0.5 min	1 min	2 min	4 min	6 min	8 min	10 min	12 min			
Strong	10	10	10	10	10	10	10	10			
	9	9	9	9	9	9	9	9			
	8	8	8	8	8	8	8	8			
	7	7	7	7	7	7	7	7			
	6	6	6	6	6	6	6	6			
	5	5	5	5	5	5	5	5			
	4	4	4	4	4	4	4	4			
	3	3	3	3	3	3	3	3			
	2	2	2	2	2	2	2	2			
Weak	1	1	1	1	1	1	1	1			
None	0	0	0	0	0	0	0	0			

SWEETNESS LEVEL

	0.5 min	1 min	2 min	4 min	6 min	8 min	10 min	12 min			
Strong	10	10	10	10	10	10	10	10			
	9	9	9	9	9	9	9	9			
	8	8	8	8	8	8	8	8			
	7	7	7	7	7	7	7	7			
	6	6	6	6	6	6	6	6			
	5	5	5	5	5	5	5	5			
	4	4	4	4	4	4	4	4			
	3	3	3	3	3	3	3	3			
	2	2	2	2	2	2	2	2			
Weak	1	1	1	1	1	1	1	1			
None	0	0	0	0	0	0	0	0			

PRODUCT CODE: 054-2018

FLAVOR LEVEL

	0.5 min	1 min	2 min	4 min	6 min	8 min	10 min	12 min			
Strong	10	10	10	10	10	10	10	10			
	9	9	9	9	9	9	9	9			
	8	8	8	8	8	8	8	8			
	7	7	7	7	7	7	7	7			
	6	6	6	6	6	6	6	6			
	5	5	5	5	5	5	5	5			
	4	4	4	4	4	4	4	4			
	3	3	3	3	3	3	3	3			
	2	2	2	2	2	2	2	2			
Weak	1	1	1	1	1	1	1	1			
None	0	0	0	0	0	0	0	0			

SWEETNESS LEVEL

	0.5 min	1 min	2 min	4 min	6 min	8 min	10 min	12 min			
Strong	10	10	10	10	10	10	10	10			
	9	9	9	9	9	9	9	9			
	8	8	8	8	8	8	8	8			
	7	7	7	7	7	7	7	7			
	6	6	6	6	6	6	6	6			
	5	5	5	5	5	5	5	5			
	4	4	4	4	4	4	4	4			
	3	3	3	3	3	3	3	3			
	2	2	2	2	2	2	2	2			
Weak	1	1	1	1	1	1	1	1			
None	0	0	0	0	0	0	0	0			